

explanatory, the following further comments are made. It should be noted that claims 20-25 are directed to a particular set of method steps employing the invention for the use of measuring small specimens. Claims 27-32 similarly relate to a method for measuring small specimens employing the subject matter of the invention in more specific form. These changes have been made in response to the Examiner's question of how the method steps limit the structure of claims 7 and 11. Now the method does not relate to a parent apparatus claim as set forth in claims 20-25 and 27-32. The comments concerning claims 23-25 are not applicable in view of the method format. Finally, with respect to claims 26, Applicant provides a structure having a plurality of rings in which at least one may be used but does not exclude the use of all. Accordingly, the structure does not contain superfluous elements but provides elements depending on its use. The structure itself is unobvious in view of its capabilities in accordance with the inventive features. Based on the above it is submitted that all of the problems associated with the rejection under 35 U.S.C. § 112, paragraph 2, have been overcome.

The Examiner has rejected the broadest claims in this case, claims 1, 2, 6, 7 and 8, under 35 U.S.C. § 102(b) as being anticipated by Howarth. The Examiner states that Howarth provides illumination to a specimen to be measured by way of a plurality of different paths through the specimen. The Examiner further states that a plurality of independent signals are developed in Howarth at the same time representing optical

has incorrectly read the disclosure of Howarth as to its true teachings. In Howarth, there is but a single path from the source to the receiver. While Howarth does teach that a broadband energy source would encompass different wavelengths passing through the specimen, nevertheless, there are no "different paths" as taught and claimed by applicant. It is clear that Applicant has taught that different paths imply different path lengths so as to separate the surface from the interior phenomena of a specimen. This is not true of Howarth which is analogous to the teachings of Norris as mentioned in the background of the present application.

The Examiner rejects claims 7, 9 and 10 as being anticipated by Tachibana. Tachibana is directed to a reflectance device and not an interactance device as claimed here. Nothing in Tachibana suggests that his construction has any utility for interactance measurements, particularly to enable distinguishing surface from internal phenomena of a specimen.

The Examiner rejects claims 14 and 20 under 35 U.S.C. § 103 as being unpatentable over Lebling et al. The Examiner also rejects claims 1-7, 11 and 21-25 under 35 U.S.C. § 103 as being unpatentable over Lebling et al in view of Azuma et al, Munekuni and Hasegawa. Lebling, as the Examiner has noted, is directed to an entirely different problem wherein reflected light is used for measuring a single region of a specimen. This is entirely different from Applicant's basic concept of utilizing two different path lengths for interactance or transmittance measurements. No one of ordinary skill would have arrived at

Applicant's claimed invention from any consideration of Lebling. Problems associated with reflectance measurements are substantially simpler than in transmittance and interactance measurements and, accordingly, resolving these more difficult problems, as has Applicant with his invention, requires substantial insight and creativity.

The remaining references are primarily directed toward reflectance situations. It is known in reflectance measurements to use different angles however, any application to interactance and transmittance problems does not follow from such disclosures.

In conclusion, it is clear that none of the references individually or in combination show or suggest the basic concept of Applicant's invention of improving measurements through a specimen by utilizing two different path lengths so as to separate surface from interior phenomena.

Based on the above, it is submitted that all of the issues in this case have been resolved and that the claims presently offered should be allowed. If the Examiner has any questions concerning this application, he is encouraged to contact the undersigned attorney.

Respectfully submitted,

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